

REMARKS / ARGUMENTS

Restriction to one of the following inventions was required:

- I. Claims 1 - 27 drawn to a method of adjusting the amount of liquid.
- II. Claims 28 - 37 drawn to a dishwasher.

Applicant confirms the provisional election, with traverse, of Group I, claims 1 - 27. As noted by the Examiner, claims 28 - 37 are withdrawn from further consideration by the Examiner as being drawn to a non-elected invention.

In the specification, Summary of the Invention paragraphs [0003] and [0004] have been amended to correspond to amendments made in claims 1 and 24. Paragraph [0005] has been deleted as it is directed to the non-elected invention set forth in withdrawn claims 28 - 37.

In the specification, paragraphs [0026], [0030] and [0034] have been amended to correct references to other portions of the specification.

Claims 1 - 37 remain in this Application. Claims 28 - 37 have been withdrawn.

The Examiner has acknowledged that claims 1 - 27 are directed to allowable subject matter if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph. Claims 28-37 have been withdrawn as the result of the earlier restriction requirement.

Applicant retains the right to present claims 28 - 37 in a divisional application.

Claims 1 - 27 have been amended to particularly point out and distinctly claim the subject matter which applicant regards as his invention. Each of claims 1 - 27 have been amended to delete "adaptively" before "adjusting" in line 1. Applicant respectfully submits that the amended language clearly points out that the invention is "a method for adjusting the amount of liquid added ...". The method steps described in the claims set forth the "adaptive" adjusting of the amount of liquid added in liquid fill periods. Accordingly, applicant respectfully submits that "adaptively" in the first line is redundant and does not further limit or clarify the method set forth in claims 1 - 27. Accordingly, applicants have deleted "adaptively" in the first line of each of claims 1 - 27. Further, each of claims 1 - 27

have been amended to replace "said" with "the" to clarify the claims. Changing of "said" to "the" is a grammatical change that does not, and is not intended to, change the scope of claims 1 - 27. Likewise the deletion of "adaptive" in line 1 does not, and is not intended to, change the scope of claims 1 - 27.

Claim 2 has been additionally amended to provide clear antecedent basis for the controller and the adaptive fill memory. Claim 2 has also been amended to clarify the description of the adjusted amount of liquid added in the next fill period as a result of the method according to the invention. Claim 2, and claims 3, 4, 16, 17, 18, 19 and 24, now recite "adjusted amount of liquid" to describe the result of the method that determines the amount of liquid to be added in the next liquid fill period of the dishwasher. Applicant respectfully submits that amended claim 2 clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claim 2 to clarify "adjusted amount of liquid" does not, and is not intended to, change the scope of claim.

Claim 3 has been additionally amended to provide clear antecedent basis for "duration of the liquid fill period". Applicant respectfully submits that amended claim 3 clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claim 3 does not, and is not intended to, change the scope of claim 3.

Claim 4 has been amended as described above in connection with claim 2. Applicant respectfully submits that amended claim 4 clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claim 4 does not, and is not intended to, change the scope of claim 4 as set forth above.

Claim 5 has been additionally amended to clarify that the amount of liquid added in the first liquid fill period following an interruption of the power supply to the dishwasher is predetermined in order to provide sufficient liquid for the circulation pump. Applicant respectfully submits that amended claim 5 clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claim 5 does not, and is not intended to, change the scope of claim 5.

Claim 6 has been additionally amended to provide clear antecedent basis for "non-volatile" adaptive fill memory. Controller and adaptive fill memory are recited in amended claim 2 that provides clear antecedent basis for those terms. Claim 6 has been further

amended to clarify that the "adjusted amount of liquid" is stored in the non-volatile memory, and that the controller uses the stored adjusted amount of liquid for the first liquid fill period following an interruption of the power supply to the dishwasher. Applicant respectfully submits that amended claim 6 clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claim 6 does not, and is not intended to, change the scope of claim 6.

Claims 7 and 26 have been additionally amended to delete "adaptively" in the last line. Amended claims 7 and 26 now provide that the amount of liquid added in each liquid fill period in the dishwasher cycle is adjusted. Applicant respectfully submits that amended claims 7 and 26 distinctly and clearly point out the subject matter that applicant regards as his invention. The amendment of claims 7 and 26 does not, and is not intended to, change the scope of claims 7 and 26.

Regarding claims 14 and 15 applicant respectfully points out that the difference between "pump motor main winding phase lag increase" (claim 14) and "pump motor phase lag increase" (claim 15) can be seen by referring to paragraphs [0020] and [0021] and Figures 3 and 4. Simply put, according to applicant's invention a pump starvation episode can be detected by sensing the phase angle of the pump motor main winding or the phase angle of the pump motor. As can be seen by referring to paragraphs [0020] and [0021] and Figures 3 and 4, a ferrite core can be positioned to either sense the phase angle of a single winding (the main winding) or of the entire motor. While the change in phase angle is different for a winding than for the entire motor, either change can be used to sense a starvation episode. Applicant respectfully submits that amended claims 14 and 15 are definite and distinctly and clearly point out the subject matter that applicant regards as his invention as set forth above and as set forth in conjunction with claim 1.

Claims 16 - 18 have been further amended to clearly recite that an additional amount of liquid is added to the adjusted amount of liquid stored in the adaptive fill memory for the first liquid fill cycle of a new dishwasher cycle depending on the condition set forth in the respective claims. Claim 17 has been further amended to change "more than a few" in the last line to "several" consistent with the specification, see paragraph [0032] at the top of page 18. Applicant respectfully submits that claims 16 - 18 as amended distinctly and clearly point

out the subject matter that applicant regards as his invention. The amendment of claims 16 - 18 does not, and is not intended to, change the scope of claims 16 - 18.

Claim 19 has been further amended to clarify that the controller includes fill cycle high and low limits to assure that an adjusted amount of liquid according to the method of the invention is greater than a minimum and less than a maximum amount of liquid consistent with the specification, see paragraph [0031], lines 7 to 9. Applicant respectfully submits that claim 19 as amended distinctly and clearly points out the subject matter that applicant regards as his invention. The amendment of claim 19 does not, and is not intended to, change the scope of claim 19.

Claims 20, 21 and 23 have been further amended to provide clear antecedent basis for the controller. Applicant respectfully submits that claims 20, 21 and 23 as amended clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claims 20, 21 and 23 does not, and is not intended to, change the scope of claims 20, 21 and 23.

Claim 22 has been further amended to change "normal operational conditions" to "operational conditions of the circulation pump prior to the addition of the rinse-aid material" to clarify that the "normal operational conditions" were the operational conditions prior to the addition of the rinse-aid material, see paragraph [0034], lines 12 and 13. Applicant respectfully submits that claim 22 as amended clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claim 22 does not, and is not intended to, change the scope of claim 22.

Claim 24 has been amended as described above in connection with claim 2 and now recites "adjusted amount of liquid" to describe the result of the method that determines the amount of liquid to be added in the next liquid fill period of the dishwasher. Applicant respectfully submits that amended claim 24 clearly and distinctly claims the subject matter which applicant regards as his invention. The amendment of claim 24 to clarify "adjusted amount of liquid" does not, and is not intended to, change the scope of claim.

Regarding claim 25, applicant respectfully points out that the difference between "pump motor main winding phase lag increase" and "pump motor phase lag increase" can be understood by referring to paragraphs [0020] and [0021] and Figures 3 and 4. Simply put,

according to applicant's invention a pump starvation episode can be detected by sensing the phase angle of the pump motor main winding or the phase angle of the pump motor. As can be seen by referring to paragraphs [0020] and [0021] and Figures 3 and 4, a ferrite core can be positioned to either sense the phase angle of a single winding (the main winding) or of the entire motor. While the change in phase angle is different for a winding than for the entire motor, either change can be used to sense a starvation episode. Applicant respectfully submits that amended claim 25 is definite and distinctly and clearly points out the subject matter that applicant regards as his invention as set forth above and as set forth in conjunction with claim 1.

Applicant respectfully submits that the amendments of claims 1 - 27 overcome the rejections under 35 U.S.C. 112, second paragraph as set forth in the Office Action. Accordingly, applicant respectfully submits that claims 1 - 27 as amended particularly point out and distinctly claim the subject matter which applicant regards as his invention.

Applicant respectfully requests that a timely Notice of Allowance be issued in this application.

If there are any questions regarding this application, please contact the undersigned attorney.

Respectfully submitted,



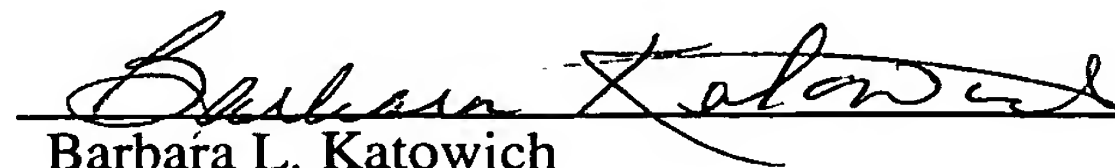
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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Date: November 7, 2004 
Barbara L. Katowich